

# Tides and Currents

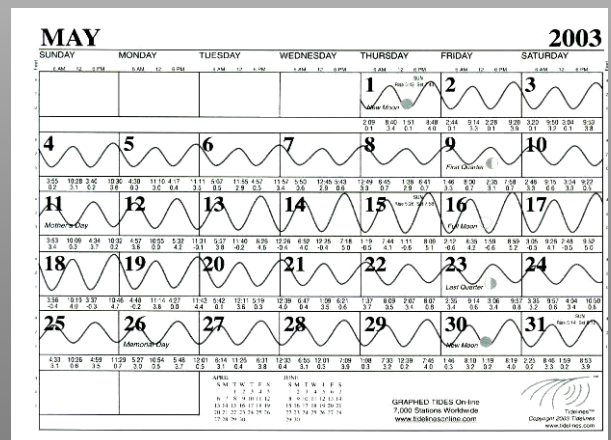
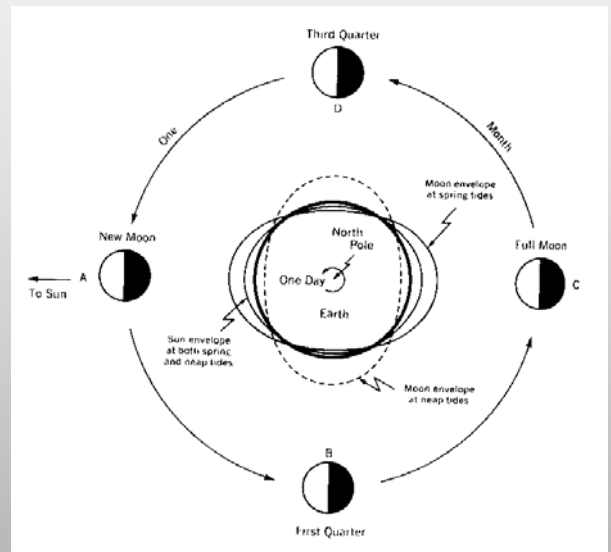
## Coasters Harbor Navy Yacht Club

[www.nwc.navy.mil/chnyc](http://www.nwc.navy.mil/chnyc)



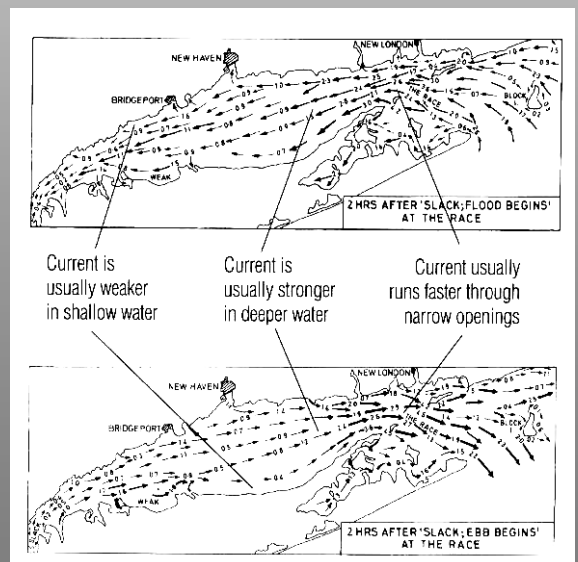
# Tides

- **Vertical change in water level**
- **Gravitational pull of moon and sun**
  - Moon moves, so does water level
  - Combine to produce effect
- **Two highs and two lows each day**
- **Look at tide table & chart**
  - Depth of water

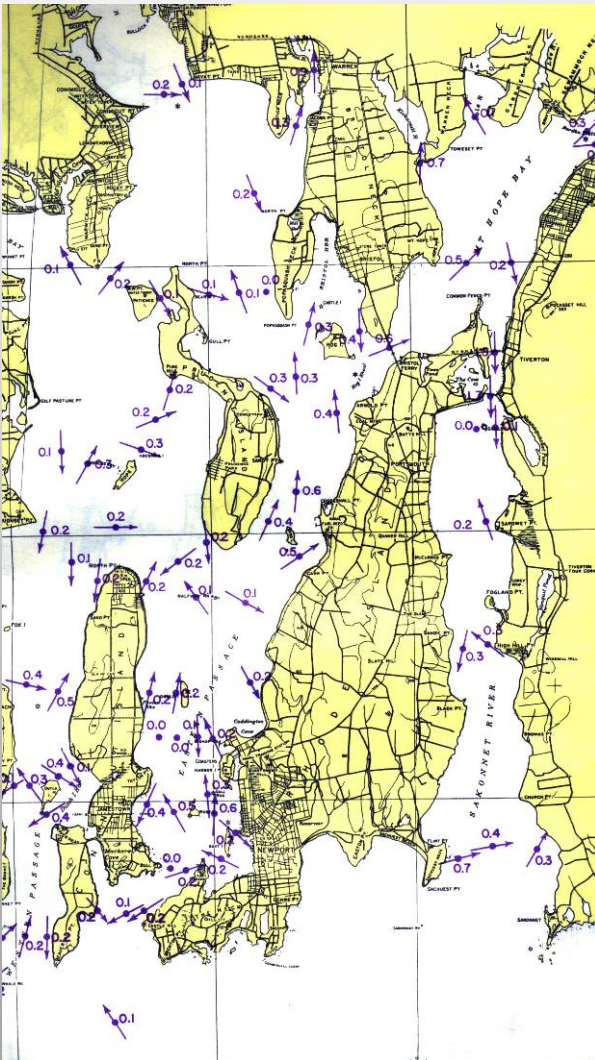


# Currents

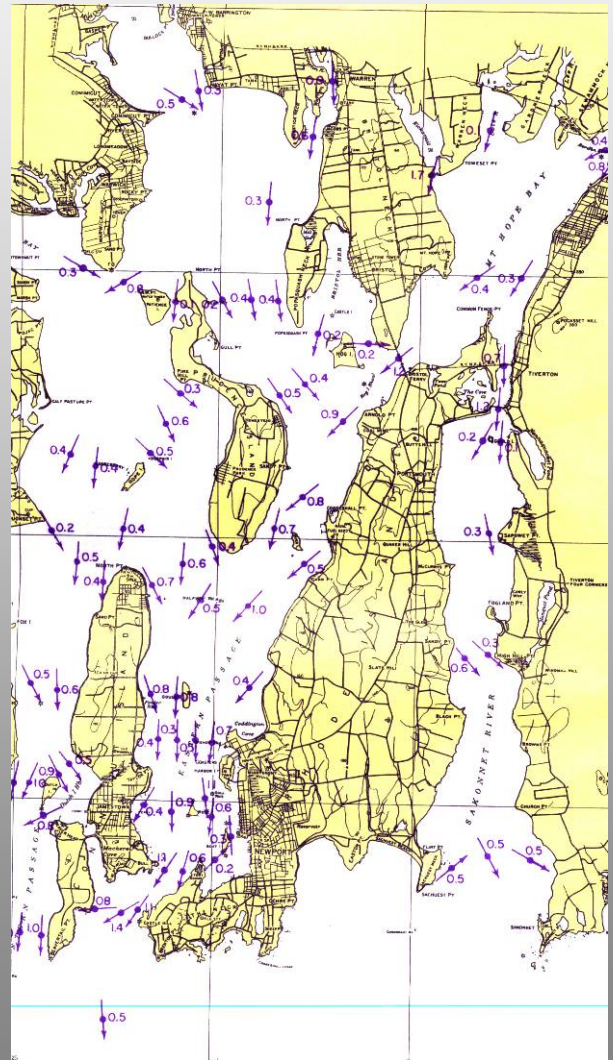
- **Horizontal movement of water**
  - Flow caused by wind and ocean movement
    - Gulf Stream
  - Tides rising and falling
    - Coming in: flooding
    - Going out: ebbing



# Narragansett Bay



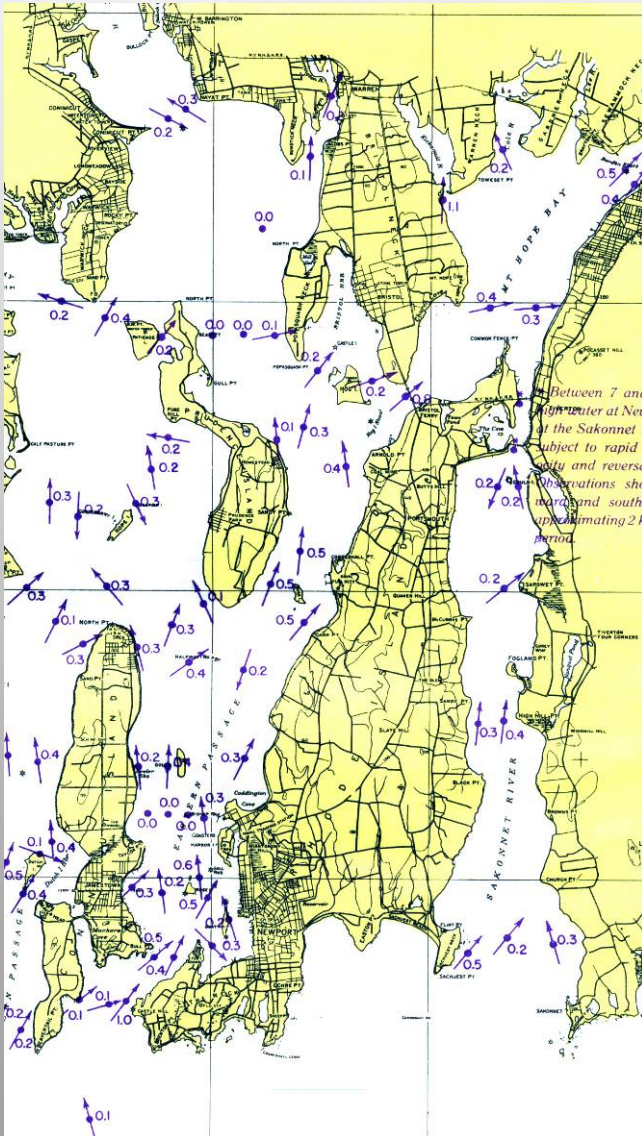
High tide



H + 4h

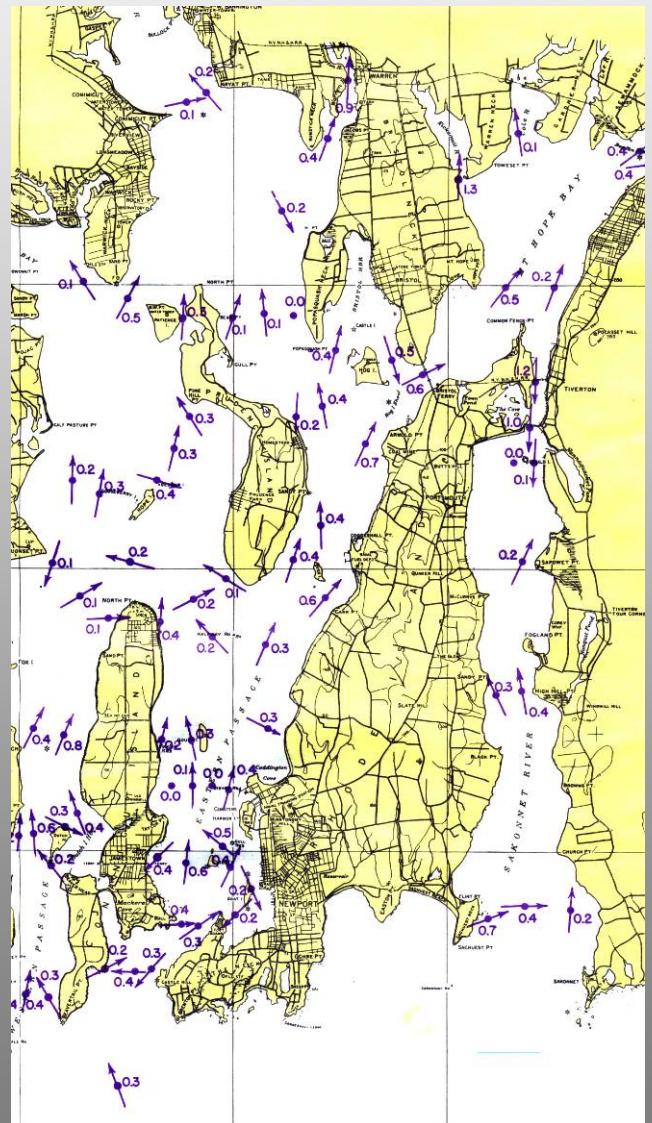


# Narragansett Bay



$H + 8h$

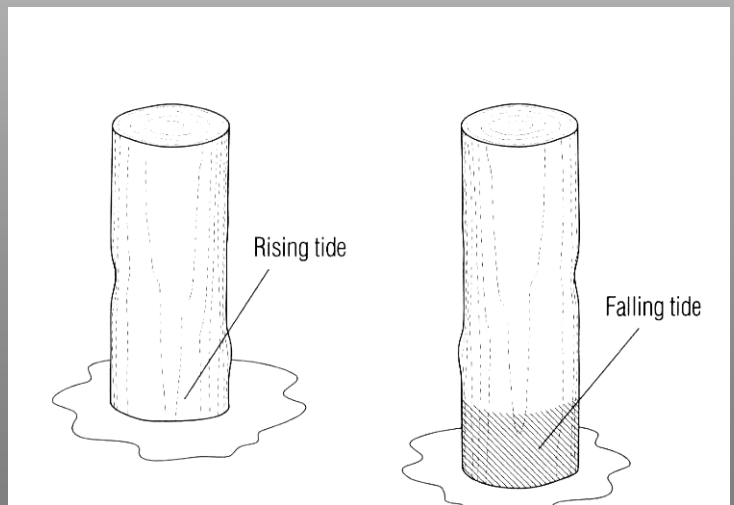
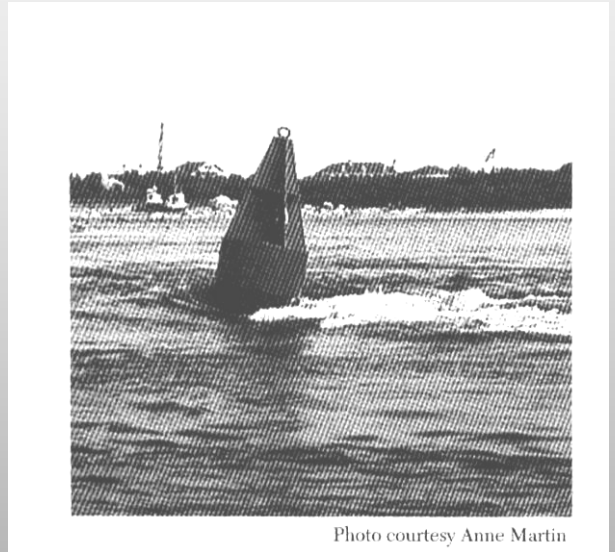
Tides & current



$H + 12h$

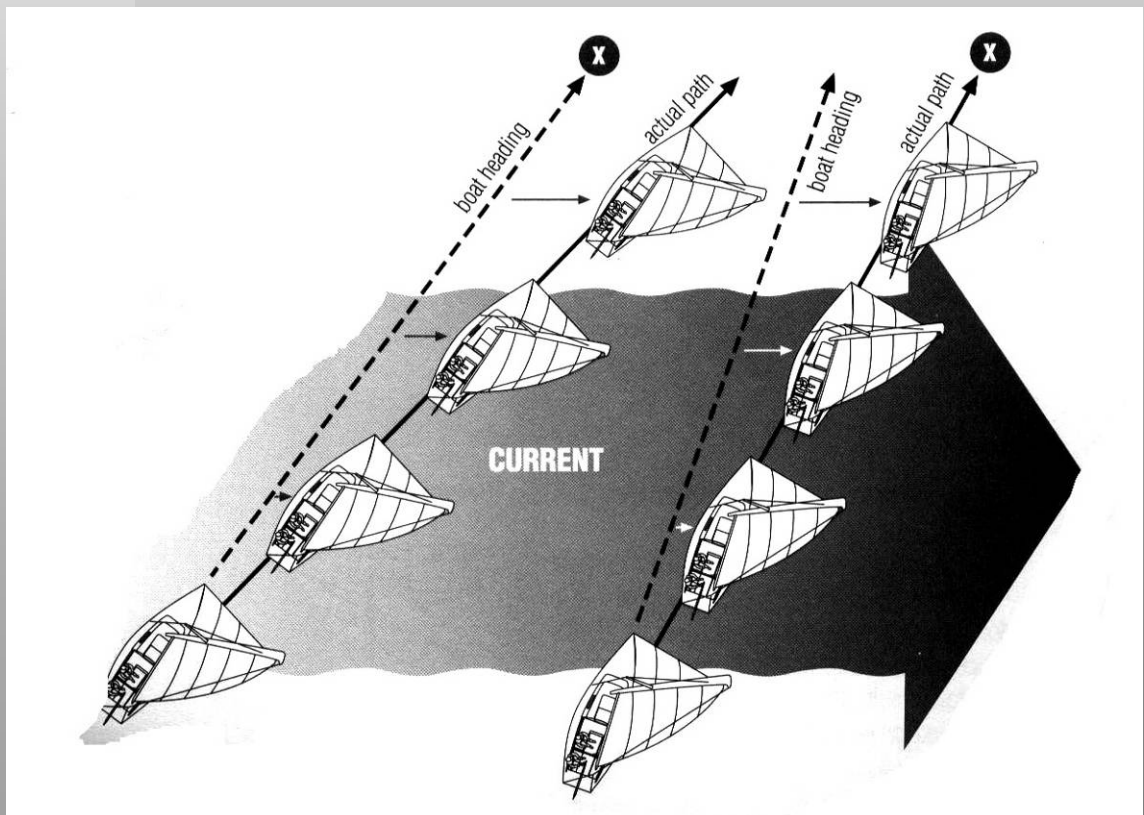
# Tell What Is Happening

- **Currents pull on buoys causing them to lean**
  - Leave wake
- **Piling or shoreline**
  - Dry shows rising tide
  - Wet shows falling tide



# Compensate for Current

- **When sailing across current**
  - **Steer for a point “upstream”**
  - **Current pulls you back to desired destination or course**



# Tide & Current Summary

- **Water moves**
- **Takes you places**
  - You want to go
  - You don't want to go
- **Current is**
  - Weaker in shallow water
  - Stronger in deep water
  - Faster through narrows
- **Beware of**
  - Newport Bridge
  - Gull Rock
  - Rose Island
  - Dumplings